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Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: markspencer

Timestamp: [year=2008; month=9; day=19; hr=10; min=28; sec=46; ms=330;]

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Application No: 10551405 Version No: 1.0

Input Set:

Output Set:

Started: 2008-08-21 19:47:14.585
Finished: 2008-08-21 19:47:19.488
Elapsed: 0 hr(s) 0 min(s) 4 sec(s) 903 ms
Total Warnings: 22
Total Errors: 9
No. of SeqIDs Defined: 22
Actual SeqID Count: 22

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E 257	Invalid sequence data feature in <221> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
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Input Set:

Output Set:

Started: 2008-08-21 19:47:14.585
Finished: 2008-08-21 19:47:19.488
Elapsed: 0 hr(s) 0 min(s) 4 sec(s) 903 ms
Total Warnings: 22
Total Errors: 9
No. of SeqIDs Defined: 22
Actual SeqID Count: 22

Error code	Error Description
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SEQUENCE LISTING

<110> Berzofsky, Jay A.
Okazaki, Takahiro

<120> Enhanced HIV-1 Vaccines and Methods for Their Use

<130> 015280-481100US

<140> 10551405

<141> 2008-08-21

<150> US 60/459,507

<151> 2003-03-31

<150> WO PCT/US04/09617

<151> 2004-03-29

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<170> PatentIn Ver. 2.1

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<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence:variant of
synthetic sequence motif derived from HIV-1
reverse transcriptase (RT) catalytic site region,
immunostimulating peptide

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Xaa Leu Tyr Gln Tyr Met Asp Asp Val

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<213> Artificial Sequence

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reverse transcriptase (RT) catalytic site region,
immunostimulating peptide, RT-2L9V, 2L9V

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Val Leu Tyr Gln Tyr Met Asp Asp Val

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Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
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Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
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Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
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<223> Xaa = any amino acid, may be present or absent															
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				85				90				95			
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
100				105				110							
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa															
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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa															
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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Leu Tyr Gln Tyr Met Asp Asp															
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Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa															
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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa															
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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa															
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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:variant of
synthetic sequence motif derived from HIV-1
reverse transcriptase (RT) catalytic site region,
immunostimulating peptide

<220>

<221> MOD_RES

<222> (1)..(200)

<223> Xaa = any amino acid, may be present or absent

<220>

<221> MOD_RES

<222> (210)..(409)

<223> Xaa = any amino acid, may be present or absent

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20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
50 55 60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
65 70 75 80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
85 90 95

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
100 105 110

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
115 120 125

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
130 135 140

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
145 150 155 160

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
165 170 175

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
180 185 190

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Leu Tyr Gln Tyr Met Asp Asp

195	200	205
Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
	260	265 270
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
	275	280 285
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
	290	295 300
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
305	310	315 320
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
	325	330 335
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
	340	345 350
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
	355	360 365
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
	370	375 380
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
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<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:HIV-1 reverse
transcriptase (RT) catalytic site region sequence
motif, wild-type RT (179-187), RT-WT

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5

<210> 8
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:variant of
synthetic sequence motif derived from HIV-1
reverse transcriptase (RT) catalytic site region,
RT-1Y immunostimulating peptide

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<210> 9
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peptide, gag (p17) (77-85), p17-WT

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<210> 10
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<210> 11
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synthetic sequence motif derived from HIV-1
reverse transcriptase (RT) catalytic site region
immunostimulating peptide

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<221> MOD_RES

<222> (1)
<223> Xaa = any hydrophobic amino acid, preferably Val

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alanine substituted peptide 4A

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<223> Description of Artificial Sequence:RT (179-187)-WT
alanine substituted peptide 6A

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<223> Description of Artificial Sequence:RT (179-187)-WT
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alanine substituted peptide 8A

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<212> PRT

<213> Artificial Sequence

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alanine substituted peptide 9A

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